Olivaceous, with darker spots and markings, and with 5 conspicuous ocelli or double ocelli, arranged as in the preceding species; fins with small dark spots.

A single specimen, 380 mm. in total length.

25. *Cynoglossus purpureomaculatus*, sp. n.

Depth of body $4\frac{1}{4}$ in the length, length of head $5\frac{3}{4}$. Snout a little more than $\frac{1}{3}$ the length of head. Diameter of eye 8 in the length of head and twice the interocular width. Two nostrils on the left side, one between the anterior parts of the eyes, the other in front of the lower eye. Maxillary extending to below the middle of eye; rostral hook extending a little beyond the mandibulary symphysis. Three lateral lines on the left side. 120 scales in a longitudinal series, 18 between upper and middle lateral lines. Dorsal 128. Anal 104. Brownish, with numerous irregular purplish spots.

A single specimen, 215 mm. in total length.

26. *Cynoglossus brunneus*, sp. n.

Depth of body 4 in the length, length of head $4\frac{2}{3}$. Snout $2\frac{2}{3}$ in the length of head. Diameter of eye $7\frac{1}{2}$ in the length of head and 3 times the interocular width. Two nostrils on the left side, one between the anterior parts of the eyes, the other in front of the lower eye. Maxillary extending beyond posterior margin of eye; rostral hook extending to below mandibulary symphysis. Two lateral lines on the left side. 74 scales in a longitudinal series, 9 between the two lateral lines. Dorsal 129. Anal 104. Uniformly brownish.

A single specimen, 200 mm. in total length.

III.—*Notes on some Oriental Geckos in the Indian Museum, Calcutta, with Descriptions of new Forms.* By Nelson Annandale, B.A., Deputy Superintendent of the Indian Museum.

Gymnodactylus Fedtschenkoi, Strauch.

Gymnodactylus caspius, Stoliczka, Proc. Asiat. Soc. Bengal, xxii. 1853, p. 410.

Gymnodactylus Fedtschenkoi, Strauch, Mém. Acad. St. Pétersb. xxxv. 1887, p. 46; Boulenger, Faun. Ind., Rept. 1890, pp. 61, 62, and P. Z. S. 1891, p. 630; Nikolsky, Herpet. Turan. in Fedtschenko, Reise in Turkestan, p. 13, pl. iv. figs. 1, 1 *a* (Russian).

There are five specimens from the Punjab Salt Range in the Indian Museum. They are in bad condition, but agree sufficiently well with Strauch's description of *G. Fedtschenkoi*. The space between the eyes is broader and the head is less depressed than in Nikolsky's figures; also the chin-shields are larger, the middle pair meeting to form a suture, not a mere point of contact, behind the mental. A male has 32 pores.

Gymnodactylus Feæ, Blgr.

Gymnodactylus Feæ, Boulenger, Ann. Mus. Genova, (2) xxiii. 1893, pp. 306, 313, 314, pl. vii. figs. 1, 1 A, 1 B, 1 C.

The only previous record of this species, so far as I am aware, is that of the type from the Karin Hills in Lower Burma. There are three female specimens from Sinkip Island, East Sumatra, in the Indian Museum, presented by the late Professor Wood-Mason. Two of them agree with the type in size and coloration, the third is larger and has 8 white bands instead of 9 on the tail. The dorsal tubercles in this adult specimen have a more distinctive character than in the young, the keel being very clearly defined and running along a more or less flattened base.

The dimensions of the large specimen are:—

	mm.
Total length	138
Snout to vent	60
Fore limb	22
Hind limb	32
Length of head	21
Breadth „	11

Gonatodes marmoratus (Bedd.).

We have a specimen of this species from Tinnevelly, presented by Colonel Beddome. To the same species I refer with a little doubt (but to the genus with certainty) two very young specimens from the Andamans. I am not aware that the genus has been recorded previously from these islands. The specimens were in a bottle containing a large number of examples of *Gymnodactylus rubidus* of different sizes.

Gonatodes affinis (Stol.).

Gymnodactylus affinis, Boulenger, Cat. Liz. Brit. Mus. vol. i. p. 42.
Gonatodes penangensis, S. Flower, P. Z. S. 1896, p. 863, pl. xliv. figs. 1, 1 *a*, 1 *b*, 1 *c*.

Gonatodes affinis, S. Flower, P. Z. S. 1898, p. 455, and 1899, p. 627; Laidlaw, ibid. 1901, (i.) p. 304; Boulenger, Fascic. Malay., Zool. vol. i. p. 148; Annandale, ibid. pp. 148, 149 (note).

This species has not been recorded from the Empire of India or Ceylon, but probably it occurs in Tenasserim. It is by no means rare in the hill-jungles of the northern part of the Malay Peninsula south of the isthmus of Kra; and the greater number of the geckos known from this district have already been recorded from Lower Burma also. Stoliczka's type, from Penang, is in the Indian Museum; it is in bad condition.

Gonatodes affinis is the only gecko which is known to enter water. Laidlaw has taken it on rocks in a jungle-stream, and I have frequently observed it slip beneath the surface of water collected in hollows in a tree-trunk and remain submerged for some minutes. When in water the skin of the back has a silvery appearance, owing to the retention of a film of air by the enlarged tubercles. Formerly I regarded this as fortuitous; but an examination of the tubercles has made me doubt whether I was right. As Boulenger has noted, they are not merely keeled, but also grooved. Possibly this peculiarity in their structure may assist in the retention of the air-film. The air so retained could not be used in respiration, but it might well protect the organism from a too rapid lowering of temperature, for water in a shady place in the Malayan jungle may be cold.

Phyllodactylus siamensis, Blgr.

Phyllodactylus siamensis, Boulenger, P. Z. S. 1898, p. 918, pl. iv. fig. 1; S. Flower, ibid. 1899, p. 627.

A specimen of this interesting form has lately been presented to the Indian Museum by H. W. Biggie, Esq. It is from Pitsanuloke in Northern Siam. An adult male, it has 7 præanal pores, arranged in a curved line and not interrupted mesially. Its size is considerably greater than that of the type. The following are its dimensions:—

	mm.
Snout to vent	45
Head	15
Body	30
Fore limb	15
Hind limb	19
Breadth of head	10

Phyllodactylus burmanicus, sp. n.

Allied to *Phyllodactylus siamensis*, Blgr. Head longer

than broad, not depressed. Snout short, rounded, shorter than distance between orbit and ear-opening. Body slender; limbs short. Granules on snout and on vertex approximately equal; only a few enlarged scales on the latter. Dorsal keeled tubercles in 12 rows, smaller than in *P. siamensis*, farther apart. Ear-opening smaller than half the diameter of the eye, subcircular. Nostril between rostral, first labial, and three small scales; 6 upper and the same number of lower labials. There are 7 præanal pores, arranged as in the preceding species. Colour dark brown above, slightly marbled with paler; labials marked with pale brown; throat shaded with dark brown; ventral surface pale brown.

	mm.
Total length	78
Head	12
Body	23
Tail	43
Fore limb	11
Hind limb	15
Breadth of head	7

Hab. Tăvoy.

Both this and the preceding species differ from Boulenger's definition of the genus in the 'Catalogue of Lizards' in that the male is provided with præanal pores.

The species is founded on a single specimen obtained by one of the collectors of the Indian Museum.

Hemidactylus subtriedroides, sp. n.

Hemidactylus maculatus, D. & B., Anderson, Res. Yunnan Exped. p. 800.

Closely allied to *Hemidactylus triedrus* (Daud.), but resembling *H. subtriedrus*, Jerdon, superficially. Lepidosis as in *H. triedrus*, except that the dorsal tubercles are smaller, less prominent and farther apart, and that the enlarged scales on the proximal part of the tail are longer and more spine-like. In the male there are 14 to 16 pores, widely separated mesially; 5 or 6 lamellæ under inner, 8 under median digits. Distance from orbit to snout approximately equal to that from ear-opening to orbit. Head and body depressed; tail depressed, flat above, tapering to a point, broad at the base, flatter and broader at the base than that of *H. Brookii*, Gray. The colour has completely faded (see Anderson, *loc. cit.*).

	mm.
Total length	132
Body	41
Head	21
Tail	70
Fore limb	20
Hind limb	25
Breadth of head	13

Hab. Tsagain, Upper Burma.

The species is founded on two male specimens obtained by one of the Yunnan Expeditions under the late Dr. J. Anderson, F.R.S. It agrees sufficiently well with Jerdon's* description of *H. subtriedrus*, which is probably confined to certain districts of S. India; but this description is too vague to be definitive. From Boulenger's† description of this species *H. subtriedroides* differs in the number of digital lamellæ and in other important points. The bulk is greater than that of *H. Brookii*, Gray, the dorsal tubercles are larger, and the whole animal is more depressed. The proportions also are different. Anderson identified the specimens as *H. maculatus*, D. & B.

Hemidactylus Garnotii, D. & B.

Hemidactylus Garnotii, Boulenger, Faun. Ind., Rept. p. 94.
Hemidactylus Mortoni, Theobald, Journ. Linn. Soc. x. p. 32; Boulenger, Faun. Ind., Rept. p. 95.

In the 'Fauna of India' Boulenger points out that Theobald's description of *Hemidactylus Mortoni* is insufficient to ensure its recognition. He states his belief that this species is either identical with or closely allied to either *H. Bowringii*, *H. karenorum*, or *H. Garnotii*. After comparing two specimens labelled *H. Mortoni* (one of them presented by Theobald) in the Indian Museum with a considerable number belonging to the three species referred to, I can see no essential difference between these two specimens and typical ones of *H. Garnotii*, D. & B., a species which is easily recognized.

Ptychozoon homalocephalum (Crev.).

Ptychozoon homalocephalum, Boulenger, Faun. Ind., Rept. p. 104, fig. 13; Ann. Mus. Genova, (2) xxiii. 1893, p. 316; Fascic. Malay., Zool. vol. i. 1903, pp. 150, 173; F. Müller, Festschr. nat. Ges. Basel, 1892, p. 209, pl. iv.; Gadow, Amphib. Rept. 1901, p. 512; Annandale, Fascic. Malay., Zool. vol. i. p. 150 (note).

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* Journ. Asiat. Soc. Bengal, xxii. 1853, p. 467; see also Stoliczka, ibid. xli. (2) 1872, p. 93, pl. ii. figs. 1, 1 *a*; and Theobald, Cat. Rept. Brit. Ind. 1876, p. 75.

† Cat. Liz. Brit. Mus. vol. i. 1876, p. 75.

Var. nov. *lionotum*.

Müller, in pointing out that *Ptychozoon Horsfieldii* was really a good species, gave as one of the diagnostic characters of *P. homalocephalum* that there are enlarged tubercles among the scales of the back. Boulenger has recorded a specimen, obtained in Pegu by the late Signor Fea, which agrees with the latter species in the more important specific characters, but lacks these enlarged tubercles. Along with several typical specimens of *P. homalocephalum* from the Andamans and Nicobars we have in the Museum two from Pegu which agree with Fea's specimen from the same district. The occurrence of three examples from Pegu agreeing thus in lepidosis seems to justify the creation of a new variety for their reception. *P. homalocephalum* var. *lionotum* may be defined as agreeing with the typical form of the species in all respects except in having no enlarged tubercles among the scales of the back.

The name of the "flying" gecko enshrines a belief that the loose fold of integument and muscular tissue along the sides in this species has a similar function to the "alar" membrane of *Draco*, enabling the lizard to take long leaps through the air, and supporting it in that element. That *Ptychozoon* does take long leaps is very possible. So do *Gehyra mutilata* and *Hemidactylus flaviviridis*—forms in which there is nothing of the nature of an aëroplane. A comparison of the "alar" membrane of *Draco* with the fold of soft tissue in *Ptychozoon* shows a very important difference—the latter structure has no skeletal support. Moreover, unlike the membrane of the flying squirrels and phalangers and of *Galeopithecus*, it is not fastened to the limbs, but has three free edges. It is not even supported by scales below, and although there are muscles at its base—that is to say, on the side on which it is continuous with the body-wall—they do not extend to the free edges. Even if they did, they could hardly keep it taut without direct or indirect support on more than one side from some rigid structure. I have never seen an adult living specimen of *Ptychozoon*; but a young one, in which the lateral fold was perfectly developed, was kept under observation by Mr. Herbert C. Robinson and myself for a fortnight. We never saw it stretch out the fold, which lay curved round the side so as to be practically invisible. I have not the slightest doubt that the use of the structure is not to support the lizard in the air, but to assist it in concealing itself by causing it to fit better into its surroundings and be less conspicuous than it would be if its body cast a distinct shadow immediately beneath it. The

dorsal surface has a very close resemblance to lichen-covered bark, and this resemblance is much increased by the lappet-like outgrowths on the tail and head. *Hemidactylus platyurus* is certainly less conspicuous on a stone wall when its lateral fold (which is not so very much less developed than in *Ptychozoon*, though this species does not "fly") is spread out on each side of it, as it commonly is. The same is probably the case with *Mimetozoon*. It is possible also that the folds in these forms have an adhesive function, as outgrowths on the tail have in some geckos; but of this I have no proof. On the whole, the attribution of powers of "flight" to *Ptychozoon* would seem to be parallel to Cantor's statement that *Liolepis Bellii*, a sand-loving, burrowing Agamid which very rarely climbs a tree, is in the habit of "leaping from bough to bough." The foundation of this statement was a real anatomical resemblance in certain respects between *Liolepis* and *Draco*; but the loose rib-supported membrane in the former has a totally different function from that of the latter, being used (partly, at any rate) as a means of sexual display *. Similarity of structure, even when it is pretty close, does not always argue similarity of function.

Note.

While on the subject of "flying" quadrupeds, I take the opportunity to restate in a clearer manner a remark recently made about the "flying frog" (*Rhacophorus nigropalmatus*, Blgr.). In a note added to Mr. Boulenger's "Report on the Batrachians and Reptiles" in 'Fasciculi Malayensis,' Zoology, vol. i. p. 138, I said:—"Beyond the statement of the Chinaman who procured Wallace his specimen, there appears to be no evidence to prove that the 'flying frog' does use its enormous feet to support it in the air, and, so far as we could see, it did not appear likely, from the condition of the web in the living animal, that their purpose was that assigned to them by the discoverer of the species." By the condition of the web I meant its flabbiness. It did not seem possible that it could be rendered sufficiently rigid, and the frog made no attempt to tauten it. Here we have a membrane provided with skeletal supports, but probably only used as an organ of adhesion. Gadow has pointed out how greatly the area of the web was exaggerated in Wallace's figure (Gadow, Amphib. Rept. p. 246, fig. 48; compare Boulenger, Fascic. Malay., Zool. vol. i. pl. vi. fig. 1).

* Annandale, P. Z. S. 1900, pp. 857, 858, and Fascic. Malay., Zool. vol. i. p. 156.